Chronic Disease Indicators: Indicator Definition

Hospitalization for acute myocardial infarction

Category:	Cardiovascular Disease
Demographic Group:	All resident persons.
Numerator:	Hospitalizations (not unduplicated*) with principal diagnosis of International Classification of Diseases (ICD)-9-CM code 410 among residents during a calendar year. When possible, include hospitalizations for residents who are hospitalized in another state.
Denominator:	Midyear resident population for the same calendar year.
Measures of Frequency:	Annual number of hospitalizations. Annual hospitalization rate — crude and age-adjusted (standardized by the direct method to the year 2000 standard U.S. population, distribution 1†) — with 95% confidence interval.
Time Period of Case Definition:	Calendar year.
Background:	Acute myocardial infarction is one measure of the incidence of heart disease. Heart disease is the largest component of cardiovascular disease mortality.
Significance :	Modifiable risk factors for coronary heart disease (CHD) include behaviors (e.g., tobacco use, physical inactivity, and improper nutrition), health status (e.g., hypertension, hyperlipidemia, overweight, or diabetes), and policies (e.g., smoking policies in restaurants and worksites). Rapid identification and treatment of heart attack reduces heart muscle damage, improves heart muscle function, and lowers the heart attack death rate. Substantial differences in CHD death rates and preventive measures exist by race, age, sex, place of residence, and other demographic factors.
Limitations of Indicator:	Substantial numbers of persons with acute myocardial infarction die before reaching a hospital. Because heart disease is a chronic disease that can have a long preclinical phase, years might pass before changes in behavior or clinical practice affect population morbidity and mortality. A substantial number of misdiagnoses, particularly among women, have been reported.
Data Resources:	State hospital discharge data (numerator) and population estimates from the U.S. Bureau of the Census or suitable alternative (denominator).
Limitations of Data Resources:	Diagnoses listed on hospital discharge data might be inaccurate. Practice patterns and payment mechanisms can affect decisions by health-care providers to hospitalize patients. Residents of one state might be hospitalized in another state and not be reflected in the first state's hospital data set. Multiple admissions for an individual patient can falsely elevate the number of persons hospitalized. Because state hospital discharge data are not universally available, aggregation of state data to produce nationwide estimates will be incomplete.
Healthy People 2010 Objectives:	No objective.

* The term not unduplicated refers to the fact that one person might account for multiple admissions. † See Klein RJ, Schoenborn CA. Age adjustment using the 2000 projected U.S. population. Hyattsville, MD: US Department of Health and Human Services, CDC, National Center for Health Statistics, 2001. Healthy people 2010 statistical notes, no. 20. http://www.cdc.gov/nchs/data/statnt/statnt20.pdf